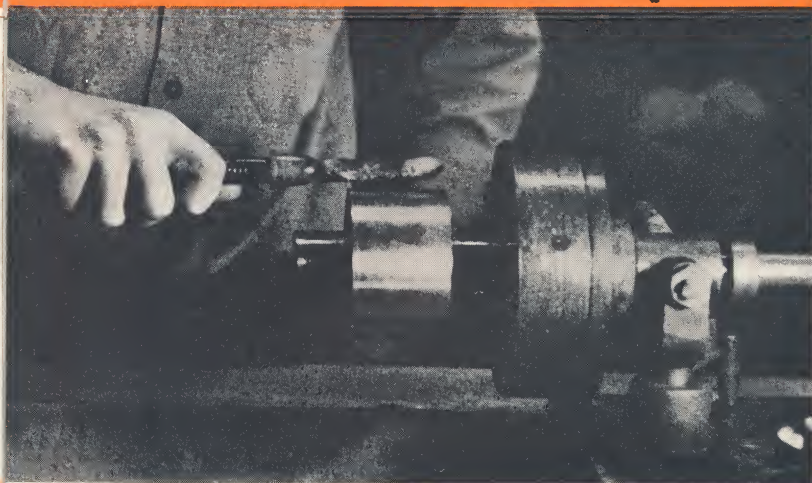




There are
many ways to take it off!



This is the way
SELECTRON
puts it on!



If You Have a Metal
YOU AND YOUR ASSOCIATES ARE
SELECTRON PROCESS

PUT - ON PROBLEM
CORDIALLY INVITED TO ATTEND A
DEMONSTRATION & SYMPOSIUM

FOR:

Design, Project, Electronics, R & D, Salvage And Production
Engineers And Technicians. COMPANY GROUP MEETINGS
AND INSTRUCTION SESSIONS CAN BE ARRANGED.

THE DATES:

BY APPOINTMENT ONLY

Reserve your private session by mail or phone. Please give
us at least 48 hours notice whenever possible. Times
available include:

Tuesdays 10:00 A.M. to 5:00 P.M.
Wednesdays 1:00 P.M. to 5:00 P.M.
Thursdays 10:00 A.M. to 5:00 P.M.

THE PLACE:

FIFTH FLOOR
116 EAST 16th STREET, NEW YORK 3, N. Y.
(Between Park Avenue S. and Irving Place)

YOUR HOSTS:

SELECTRONS, LTD., New York, N. Y., (212) CA 8-6800
MARLANE DEVELOPMENT CO., INC., New York, N. Y.
Jesse Lane, Technical Director; Marv Rubinstein, Research
Consultant; E. Stanley Ogden, Production Mgr.

(Please Post This Invitation On Your Bulletin Board)

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FIRST CLASS PERMIT NO. 16858, NEW YORK, N. Y.

SELECTRONS, LTD.

116 East 16th St.

New York 3, N. Y.

SELECTRON AT WORK

A Cross Section Of Valuable Metal Put-On Applications

HEAT TREATING DEPARTMENTS

- Only 0.0005 inches of SELECTRON Copper (alkaline) is sufficient to prevent hardening of selected areas during most carburizing operations.
- A flash deposit of nickel, followed by a laminate of copper and tin, will serve as an efficient stop-off during nitriding.

AIRCRAFT & MISSILE MAINTENANCE

- Resizing of worn, scored or out-of-round bearings, housings, shafts, or other mechanical components which have become eroded or were originally mismachined. A valuable field operation.
- Repair of eroded zinc plating on propeller blades. Repair of cadmium plating removed from components during assembly.
- Filling-in pits or score marks with nickel on nose cone surfaces. Also sealing porosity on castings, metal spray or other porous surfaces.
- Electroplating ultra-high strength steel (250,000 to 350,000 psi) components with no hydrogen embrittlement.
- Gold, rhodium or platinum plating of assembled components or sections too large for existing precious metal plating facilities.
- A wide variety of electrical, wave guide, optical, soldering and miscellaneous applications in manufacturing or field maintenance.

PRINTED CIRCUIT USERS

- Repair defective gold or rhodium plating on assembled circuit cards.
- Gold or nickel plus rhodium plating of contact fingers for a low resistance, high wear sliding surface.
- Lead-tin alloy plating of areas which do not "take" during hot dip soldering.
- Repairing breaks in continuity with copper plating.
- Plating flexible circuits, and numerous other miscellaneous circuit repair and manufacturing operations.

MACHINE SHOPS

- Costly components which have become worn or are erroneously mismachined can be accurately built back to tolerance with SELECTRON.
- A SELECTRON operator can plate to closer tolerance than a lathe operator can machine. Consequently, bearing fits to ± 0.00005 inches are readily achieved by machining housings slightly oversize and SELECTRON plating back to tolerance.
- Dimensional corrections in "tenths" or fractions of a tenth.
- Chromium plating dies, tools and gages to provide a low wear surface.
- Filling-in fretting, pitting and erosion on flange or bearing surfaces.
- Selective etching and electro-machining for removal of metal or for dynamic balancing of rotary components.

RESEARCH & DEVELOPMENT LABS

For R & D, model making, and prototype work, a SELECTRON unit — occupying only the area of a desk top — provides complete electroplating facilities for virtually any plateable metal. No time consuming setting-up of tanks. No expensive storage of chemicals used only infrequently. No troublesome paper work or routing problems.

SOLDERING & BRAZING

- Facilitating solderability on stainless steel, aluminum, oxidized nickel, aged tin and other difficult to solder metals.
- Soldering to carbon or to semi-conductor materials such as germanium or silicon.
- Copper plating of steel and other metals to enable simplified brazing operations.

SHIPBOARD & DRYDOCK REPAIRS

- Protection of critical areas against salt water corrosion by depositing indium alloys, tin alloys or cadmium.
- Resurfacing of bearing support surfaces with silver deposits.
- Filling-in pits left by fretting or galling corrosion on flanges or other mating surfaces.
- Soft metal deposits on flanges or mating surfaces to provide a pressure gasket, insuring proper seating during assembly.
- Building-up worn shafts, housings, bearings and other mechanical components — often without removal from the engine room.
- A wide variety of electrical, optical, communications and soldering applications.

ROTOGRAVURE & LITHOGRAPHY

- Filling-in scratches, nicks and "dings" on gravure cylinders or plates.
- Correcting erasures or erroneous or modified copy on gravure rolls or lithograph plates.
- Correction of tone values by partially filling in etched cells with copper plating.
- Hard nickel surfacing of worn chromium plated areas.
- Building-up worn or mismachined shafts or press components.

WAVE GUIDE MANUFACTURING

- Defective silver or nickel deposits on wave guide or microwave flanges can be removed mechanically and easily replaced by SELECTRON plating, without having to re-route the entire part.
- Glass "windows" rimmed with lead foil can easily be soldered into aluminum wave guides where the soldering areas have been SELECTRON plated with nickel plus a tin-lead solder alloy.
- Pressure gaskets of indium, tin or cadmium are inexpensively plated onto wave guide flanges. These allow critical adjustments during assembly, while at the same time increasing corrosion resistance.

ELECTRONICS & ELECTRICAL APPLICATIONS

- Silver plating bus bar connections, knife switches or circuit breakers on isolated areas of large pieces.
- Gold, silver or rhodium plating of contacts on computers or other electrical instruments. Often carried out in the field without having to disassemble components.
- Full production plating of small selected areas, e.g. capacitor leads or transistor tabs.
- Plating on rubber-metal or plastic-metal combinations, electrical assemblies, or other combinations which should not be immersed in a plating bath.
- Plating of extremely pure deposits for x-ray or spectrographic work.
- Plating on semi-conductors or unusual metals, e.g. germanium, tungsten, indium antimonide, bismuth selenide, etc.
- Automatic wire and strip plating in continuous lengths.
- Deposition of unusual metals such as bismuth or gallium.
- Prototype plating and a large number of applications on printed circuitry, wave guides, soldering, etc. described elsewhere on this page.

METAL REMOVAL (Reverse Current)

- Selective etching for resizing or resurfacing applications.
- Deburring. Particularly valuable on miniature components and those too delicate to deburr by tumbling methods.
- Electropolishing. Selected areas of various metals easily brought to maximum luster electrochemically.

THE SELECTRON PROCESS CAN BE MECHANIZED FOR FULL SCALE "FLOW PLATING" PRODUCTION

THIS IS THE WAY WE PUT IT ON!

HOW SELECTRON WORKS

The SELECTRON PROCESS is an engineering technique for applying a controlled electrodeposit on a selected area, without having to immerse the component in a plating bath. While the theory is that of electroplating, the practice is similar to arc welding.

The component or area to be plated is made cathodic by means of a flexible cable leading to a D.C. power supply. A flexible anode lead connects to a tool or "stylus" — part of which is a carbon anode wrapped with an absorbent pad soaked in cleaning or plating solution. In use, this stylus is held in the hand like a paint brush and passed back and forth over the area to be plated.

Virtually any metal which can be bath plated can be applied by this technique. (A partial list of SELECTRON solutions is given below.) Rate of deposition is extremely high, and thickness can be accurately controlled. The procedure is easily learned by unskilled help.

Resulting SELECTRON deposits are hard, of unusually low porosity, free of hydrogen embrittlement, very pure and

metallurgically sound. When properly applied, they satisfy existing U.S. government plating specifications.

The SELECTRON PROCESS can be mechanized for full scale production in a new technique known as "Flow Plating". It can also be used with reverse current for metal removal.

MINIMUM EQUIPMENT NEEDED

A SELECTRON installation can be purchased for a fraction of the cost of even a small bath plating shop.

In spite of this, a compact SELECTRON unit — assembled on the area of a desk top — provides on a small scale the facilities of a complete plating department.

All that is required is a special power pack, an assortment of SELECTRON plating solutions, a selection of working tools (styli), and a small group of accessories. Complete written and personal instructions are provided with each new unit.

METALS

which can be deposited

with the

SELECTRON PROCESS

Arsenic
Bismuth
Cadmium
Chromium
Cobalt
Cobalt-Tungsten
Copper
Gallium

Gold
Indium
Iron
Iron (Black)
Lead
Lead-Tin
Mercury
Nickel
Nickel (Black)

Nickel-Tungsten
Palladium
Platinum
Rhenium
Rhodium
Ruthenium
Silver
Tin
Zinc

AND A VARIETY OF OTHER BINARY AND TERNARY ALLOYS

SELECTRONS, LTD.

116 East 16th St.

New York 3, N. Y.

Phone: CA 8-6800

Selectron Distributors and Technical Representatives Throughout the U.S., Canada, and Abroad

SELECTRONS, LTD.

116 East 16th St.

New York 3, N. Y.

Selective Plating Method



Mr. T. H. Nelson, Engineer
Interlocking Systems Company
Box 1546
Poughkeepsie, New York

SELECTRON
invites you to
a put-on party!